

RECEIVED

|                                                                                                                           |  |                                   |  |                                      |  |                                       |  |
|---------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------|--|--------------------------------------|--|---------------------------------------|--|
| Type Test<br><input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |  |                                   |  | Test Date<br>04/16/81                |  | APR 23 1981                           |  |
| Company<br>Morris Antweil                                                                                                 |  |                                   |  | Connection<br>Air                    |  | O. C. D.                              |  |
| Well<br>Undesignated                                                                                                      |  |                                   |  | Formation<br>Morrow                  |  | Unit<br>ARTESIA, OFFICE               |  |
| Completion Date<br>04/16/81                                                                                               |  | Total Depth<br>12015              |  | Plug back TD<br>12015                |  | Elevation<br>3362 GL                  |  |
| Csg. Size<br>5 1/2                                                                                                        |  | Set At<br>12015                   |  | Perforations:<br>From 11718 To 11732 |  | Well No.<br># 1                       |  |
| Tub. Size<br>2 3/8                                                                                                        |  | Set At<br>11658                   |  | Perforations:<br>From To             |  | Unit Soc. Twp. Rge.<br>B 30 19s 30e   |  |
| Type Well - Single - Bradenhead - G.G. or G.O. Multiple<br>Single                                                         |  |                                   |  | Packer Set At<br>11658               |  | County<br>Eddy                        |  |
| Producing Thru<br>Tubing                                                                                                  |  | Reservoir Temp. °F<br>191 @ 11658 |  | Mean Annual Temp. °F<br>60°          |  | Baro. Press. - P <sub>a</sub><br>13.2 |  |
| L                                                                                                                         |  | H                                 |  | Gg                                   |  | Prevor                                |  |
| 11658                                                                                                                     |  | 11658                             |  | .6847                                |  | 2"                                    |  |
| % CO <sub>2</sub>                                                                                                         |  | % N <sub>2</sub>                  |  | % H <sub>2</sub> S                   |  | Meter Run                             |  |
| 2.620                                                                                                                     |  | .794                              |  |                                      |  | Taps                                  |  |

  

| FLOW DATA |                  |        |              |                 |                      |          | TUBING DATA     |          | CASING DATA     |          | Duration of Flow |
|-----------|------------------|--------|--------------|-----------------|----------------------|----------|-----------------|----------|-----------------|----------|------------------|
| NO.       | Prover Line Size | X      | Orifice Size | Press. p.s.i.g. | Diff. h <sub>w</sub> | Temp. °F | Press. p.s.i.g. | Temp. °F | Press. p.s.i.g. | Temp. °F |                  |
| 5!        |                  |        |              |                 |                      |          | 3400            |          |                 |          | 72 Hr.           |
| 1.        | 2                | X 1/8  |              | 2645            |                      | 68       | 2645            |          |                 |          | 1 Hr.            |
| 2.        | 2                | X 3/16 |              | 1805            |                      | 68       | 1805            |          |                 |          | 1 Hr.            |
| 3.        | 2                | X 7/32 |              | 1430            |                      | 69       | 1430            |          |                 |          | 1 Hr.            |
| 4.        | 2                | X 1/2  |              | 1120            |                      | 69       | 1120            |          |                 |          | 1 Hr.            |
| 5.        |                  |        |              |                 |                      |          |                 |          |                 |          |                  |

  

| RATE OF FLOW CALCULATIONS |                       |                  |                         |                       |                   |                                         |                     |
|---------------------------|-----------------------|------------------|-------------------------|-----------------------|-------------------|-----------------------------------------|---------------------|
| NO.                       | Coefficient (24 Hour) | $\sqrt{h_w P_m}$ | Pressure P <sub>m</sub> | Flow Temp. Factor Ft. | Gravity Factor Fg | Super Compress. Factor, F <sub>pv</sub> | Rate of Flow Q, Mgd |
| 1                         | .2648                 |                  | 2658.2                  | .9924                 | 1.208             | 1.184                                   | 999                 |
| 2                         | .6082                 |                  | 1818.2                  | .9924                 | 1.208             | 1.179                                   | 1563                |
| 3                         | .8393                 |                  | 1443.2                  | .9915                 | 1.208             | 1.151                                   | 1670                |
| 4                         | 1.087                 |                  | 1133.2                  | .9915                 | 1.208             | 1.119                                   | 1651                |
| 5.                        |                       |                  |                         |                       |                   |                                         |                     |

  

| NO. | P <sub>t</sub> | Temp. °R | T <sub>r</sub> | Z    | Gas Liquid Hydrocarbon Ratio | A.P.I. Gravity of Liquid Hydrocarbons | Specific Gravity Separator Gas | Specific Gravity Flowing Fluid | Critical Pressure | Critical Temperature |
|-----|----------------|----------|----------------|------|------------------------------|---------------------------------------|--------------------------------|--------------------------------|-------------------|----------------------|
| 1.  | 3.92           | 528      | 1.40           | .713 | dry                          |                                       | .6847                          |                                | 678               | 378                  |
| 2.  | 2.68           | 528      | 1.40           | .719 |                              |                                       |                                |                                |                   |                      |
| 3.  | 2.13           | 529      | 1.40           | .755 |                              |                                       |                                |                                |                   |                      |
| 4.  | 1.67           | 529      | 1.40           | .798 |                              |                                       |                                |                                |                   |                      |
| 5.  |                |          |                |      |                              |                                       |                                |                                |                   |                      |

  

| NO. | P <sub>t</sub> <sup>2</sup> | P <sub>w</sub> | P <sub>w</sub> <sup>2</sup> | P <sub>c</sub> <sup>2</sup> - P <sub>w</sub> <sup>2</sup> | (1) $\frac{P_c^2}{P_c^2 - P_w^2} =$ | (2) $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n =$ |
|-----|-----------------------------|----------------|-----------------------------|-----------------------------------------------------------|-------------------------------------|------------------------------------------------------|
| 1   | 3413.2                      | 2665.8         | 7106.5                      | 4543.4                                                    | 1.230                               | 1.158                                                |
| 2   |                             | 1842.2         | 3393.7                      | 8256.2                                                    |                                     |                                                      |
| 3   |                             | 1476.9         | 2181.2                      | 9468.7                                                    |                                     |                                                      |
| 4   |                             | 1176.0         | 1383.0                      | 10266.9                                                   |                                     |                                                      |
| 5   |                             |                |                             |                                                           |                                     |                                                      |

  

|                         |  |                     |  |                  |  |             |  |
|-------------------------|--|---------------------|--|------------------|--|-------------|--|
| Absolute Open Flow      |  | Mgd @ 15.025        |  | Angle of Slope @ |  | Slope, n    |  |
| 1,934                   |  |                     |  | 54.75°           |  | .707        |  |
| Remarks:                |  |                     |  |                  |  |             |  |
| Approved By Consultant: |  | Conducted By:       |  | Calculated By:   |  | Checked By: |  |
|                         |  | Davis Services Inc. |  | Rick Pagan       |  |             |  |